

loaded on either side of the crown of the arch, and the various points of failure were determined without the assumption of one of them. By means of this problem the proper form of action might be designed for an arch to be subjected to any number of pressures acting in any position and direction. Thus the effect of men walking over a vaulted ceiling, or any other pressures in vertical directions, or the effect of the thrust of other arches, or of pressures in oblique directions, might be counteracted by the particular form of section arrived at by the application of the method described in this section. The author followed the principle of Professor Moseley, and applied them to the proof of a tentative process, which was advanced by M. M. Lesur and Chapeyron, and proved by an abstruse method requiring the aid of the integral analysis on principles entirely different from those of Professor Moseley. The investigations and problems in this paper did not require the application of algebraic analysis either in their proof or practical application; no more than a knowledge of the first laws of statics, and the leading principles of geometry, was required either to work the problems or to undertake the reasoning on which they were founded. The appendix contained some observations on methods of finding the centre of gravity without algebraic calculation; and the paper was illustrated by a series of diagrams, which rendered the problems clear.

SIR JOHN RENNIE'S THIRD CONVERSATION.

THE third conversation of the season given by Sir J. Rennie to the members of the Institution of Civil Engineers and his friends, was held on Saturday evening, June the 27th, and was numerously attended. Many additions of interest were made to the collection of models. Among them we may mention Fairbairn's very ingenious method of fastening boiler rivets by pressure instead of the old method of hammering. Captain Dowell's plan for avoiding the inconvenience of the difference between the broad and narrow gauge, in the transport of goods on railways, by having cases of such dimensions, that they should accord with the narrow gauge placed end ways and be readily transferred to the broad gauge travelling sideways. These placed upon trucks with rollers in them, would enable a considerable quantity of goods to be readily exchanged from one gauge to another. Some interesting modifications of the electric telegraph, by which any signals could be transmitted from a central station to any of the branch lines or stations without necessarily being sent through either of the main termini. This ingenious arrangement was governed by a small instrument called a deflector, which broke or established the current apparently with undeviating regularity.

Professor Wheatstone's stereoscope, and Perigal's instrument for describing curves and various other figures of the greatest variety, and apparently by the most eccentric, yet most perfectly regulated action, combining the effect of six circular motions. Leake's specimens of pressed leather ornaments were particularly admired, and it was gratifying to find this useful invention being so greatly improved as it has been lately.

RUINS IN ATHENS.

In those tranquil undisturbed scenes, where the impressions produced by outward picturesqueness of form give place to reflection, the ruin becomes a delicate allusion to the frailty of human existence. This is, at least, the moral side of the subject which should be most prominent in the representation of a ruin in a classical composition, and which, next to its advantages as a beautiful object, constitutes one of its chief sources of interest. In a picture, it is necessary to give up the greater part of those associations which render ruins objects so valuable to the antiquarian; they must cease to point out, in a special and distinct manner, the character and customs of the nation to which they belonged, the period at which it flourished, and its connection with

other people. All these circumstances cause the thoughts to wander beyond the limits of the scene, and detract from its unity. At Tiryns and Mycenæ, near the gulf of Nauplia, there are ruins in Hellenic masonry, the remoteness of which refers them to the remotest periods of Grecian history; whilst their comparison with the finished and elegant monuments at Athens, brings down these, last to a time, as it were, little remote from our own. The walls of these two cities are formed of huge blocks of stone, imperfectly shaped to each other, and on cemented; and the subterranean vault near Mycenæ, considered to have been the treasury of Atreus, and also designated as Agamemnon's tomb, though more perfect in its design and work, presents in its singular character, and the massiveness of its construction, a style equally primitive. In both cases the surrounding prospect is perfectly barren: no bushes deck the harsh nudity of the walls, no shrub casts a doubtful shadow on the mausoleum. But in a drawing of monuments of this kind, these circumstances, on picturesque as they are, could not be omitted; or the spot would lose its peculiar character. The representation of them must, therefore, be confined to the form of a mere diagram, or illustrative sketch, having for its object the style of the ancient monument and the peculiarities of its site. It is an interest, which, to be fully partaken of, should be quite distinct from that which a finished picture affords, and which is derived from a source too different to admit of their being both embodied into one sentiment.

In Greece, more than in any other country, the modern art might be best expected to associate and harmonize with the ancient. The prevailing feeling there, is, that of reviving the nationality of ancient Greece—of establishing a close and patriotic connection between its former splendour, and its present prosperity and political influence. This spirit shows itself in the adoption of the language of the ancient Greeks, of their dramas, coins, &c.; but, fortunately for the arts, it has not been allowed to encroach upon the purity of the ancient monuments. At Athens, no attempt has been made to embody these memorials of the past in the rising city. Their simplicity and chasteness remain undisturbed by the proximity of any modern edifice. These have been kept at a respectful distance; and, in their modest retirement, exhibit no pretensions to imitate the sublime prototypes of architecture, which the nation prides itself in possessing. This forbearance is the more striking, since the same elements which produced the majestic Temple of Jupiter and the Parthenon, are still had recourse to for the ornament of the modern city.

The little apparent connection between modern Athens and the monuments which adorn the neighbouring heights, shews the impossibility of forming any close union, whether architectural or modern, between the two; and of raising the splendour of the modern city upon the venerable remains of her former greatness. How different the allusions to the past, which Nature has, as it were, accidentally brought about! The rocks of Mount Pentelicus, still rough from the strokes of the axe, and its slopes covered with the fragments scattered by the chisel, impress forcibly the time when the columns of the Olympian Temple, or the beautiful frieze of the Parthenon, were cutting out of the quarry, or making their way down the rugged paths of the mountain. You might almost fancy, by turning a projecting corner, or by penetrating into the ravine which forms a natural footway up the ascent, to see the busy slaves and their robed masters; indeed, all the life and bustle which the erection of a stupendous monument of art would spread into the very passes of the mountain. Some large blocks lying prostrate for immediate use, and numberless chips, glaring white from their recent removal, draw still closer together the union between the present and the past, which appears so unexpectedly in this retired recess.

The rich yellow tint so conspicuous in the marble monuments about Athens is not one of their least remarkable features; the decomposition of the marble has taken place at the very surface only, and the brilliant colour of this light and superficial envelope makes it appear, that the golden rays which in this beautiful climate have for centuries risen and set upon

these ruins with almost unvarying splendour, had at length left a stain upon the marble, bright and pure as the light which plays about them.

Generally speaking, ruins present less variety of colour than the rock whence the material was taken. The roughness of their surface, which allows the water to escape down the furrows and gives speedy effect to the drying action of the wind, prevents the formation of the green tints which are the result of moisture; and which are more abundant on plastered walls or smooth stone, over which the moisture spreads.

Those monuments at Rome, the materials of which are indifferently rough and smooth in various parts of the edifice, present considerable variety of tint. Some indeed, having been patched up at different periods, present a picturesque contrast of the brown and lighter colours; but the numerous brick buildings near the forum in the Campagna do not shew much variety, and few traces of green, excepting where exposed to damp; thick foliage, however, decks their summits and projecting parts.

The brick masonry of the palace of the Cæsars and of other similar ruins, is of a dull warm grey, nearly uniform; but the upper part of the walls has become brown. The exterior of the Colosseum, and such other buildings as are externally sheathed with a covering of stone masonry, have more or less a yellowish tint; but scarcely present a distant resemblance to the gilded appearance of the ruins at Athens.

Correspondence.

CEDAR FOR BUILDING PURPOSES.

SIR,—Observing in a letter signed "J. E." in your last number, a proposal to introduce foreign cedar for building purposes, will you allow me to make your valuable publication the medium for inquiring if "J. E.," or any of your correspondents, can furnish any data from which to calculate its relative strength, if used for the purposes to which oak is usually applied in buildings, also the names of the principal importers.

Is the price stated 5d. per superficial foot, an inch thick? if so, I suppose it can be supplied alongside (in the Thames), at something less than 5s. a foot cube. Can any correspondent speak as to its liability to warp or shrink?—I am, Sir, &c.,
EDIFICATOR.
Pimlico, June, 1846.

Miscellaneous.

CARPENTER'S BILL IN 1742.—The *Chelmsford Chronicle* says:—A correspondent has sent us the following copy of a carpenter's bill, for work done upwards of a century ago:—

July 15, 1742. A bill of carpenter's work done for Johnadab Brycher.

	£.	s.	d.
15 for 48 foot of Sell	01	04	00
for a day of 2 men	00	04	00
16 for $\frac{1}{2}$ a day ditto	00	02	00
17 for $\frac{1}{2}$ a day ditto	00	02	00
for 6 foot of quarter	00	01	9
for 27 foot of paling	00	15	00
23 for a day of a man	00	02	00
for 12 6-foot battens	00	06	00
for 4 12-foot ditto	00	04	00
24 for a day of a man	00	02	00
for 2 window sashes	00	02	9

03 05 6

EXTRAORDINARY DESTRUCTION OF HOUSES.

—Another of those astounding conflagrations, which, in the nineteenth century, appear to be chiefly, though not altogether, confined to the American side of the Atlantic, has just occurred at St. John's, Newfoundland. Two-thirds of the town have been destroyed, comprising two whole streets, each fully a mile in length, besides detached buildings, and extensive stores on the wharfs. Numerous public edifices are amongst the number. Twelve thousand individuals are houseless; and at least a million of money consumed.

THE LATE MR. HAYDON.—A meeting has been held to devise means for providing for the widow and daughter of this unfortunate artist, and a subscription commenced to raise a fund. The Queen has granted a pension of 50*l.* per annum to Mrs. Haydon.

* From a very interesting work "On the Elements of Perspective," considered with reference to Landscape Painting. By Henry Twining, Esq. Printed for private distribution: 1846.